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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
NG, CHRISTINE Y	

ART UNIT	PAPER NUMBER
2663	6

DATE MAILED: 03/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/727,613	RUNE, JOHAN	
	Examiner	Art Unit	
	Christine Ng	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 December 2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,14,18,19,22 and 23* is/are rejected.

7)☒ Claim(s) *2-13,15-17,19-21 and 24* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 December 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2&5*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. Figures 1-2b and 5-8c should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 4-7, 9-13, 16 and 17 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

3. Claims 2, 3, 19 and 21 are objected to because of the following informalities:

a) In claim 2 line 1, "previous claim" should be replaced with "claim 1".

b) In claim 3 line 1, "previous claims" should be replaced with "claims 1 or 2".

c) In claim 19 line 1, "previous claim" should be replaced with "claim 18".

d) In claim 21 line 1, "previous claim" should be replaced with "claim 20".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 1, 2, 18 and 19 are rejected under 35 U.S.C. 102(e) as being unpatentable over U.S. Patent No. 6,590,928 by Haartsen.

Referring to claims 1 and 18, Haartsen discloses in Figures 11 and 12 a method for routing a packet from a first slave (Figure 11, Element 9) to a second slave (Figure 11, Element 6) through a master node (Figure 11, Element 2). A bridge (Figure 11, Element 2) acts as a master (Figure 12, Element 1201) to relay information from a source unit (Figure 11, Element 9) to a destination unit (Figure 11, Element 6). Refer to Column 14, lines 11-20. The method also discloses that the slaves (Figure 11, Elements 1-10) each have an address stored in a database (Figure 12, Element 1211). Refer to Column 12, lines 32-34 and Column 19, line 62 to Column 20, line 7.

The method comprises obtaining the address information of the second slave (Figure 11, Element 6) from the master (Figure 12, Element 1201). The master (Figure 12, Element 1201) acquires the address information of all slaves in its piconet. Refer to Column 19, line 62 to Column 20, line 7. The method also comprises noting the address information of the second slave (Figure 11, Element 6) in the header of the Baseband packet. "A particular slave in the piconet is identified by a member address" which is a "3-bit address in the packet header" (Column 12, lines 41-44). Refer to Column 20, lines 19-33. The method also comprises transmitting the Baseband packet from the first slave (Figure 11, Element 9) to the master (Figure 12, Element 1201). The

packet is sent from a first slave 9 to the master unit (Figure 12, Element 1201) since the master acts as a bridge between source and destination units. Refer to Column 14, lines 11-17 and Column 18, lines 44-50. The method also comprises analyzing the address information of the second slave (Figure 11, Element 6) in the header of the Baseband packet. The master unit 1201 sends out a page message to contact the second slave (Figure 11, Element 6), which includes the slave address of the second slave (Figure 11, Element 6). Refer to Column 20, lines 19-33. Finally, the method comprises forwarding the Baseband packet from the master (Figure 12, Element 1201) to the second slave (Figure 11, Element 6) according to the address information. The master relays packets to the destination. Refer to Column 14, lines 11-17.

Referring to claims 2 and 19, Haartsen et al disclose that the address information constitutes an AM_ADDR. "A particular slave in the piconet is identified by a member address" which is a "3-bit address in the packet header" (Column 12, lines 41-44). The member address reads on an AM_ADDR as described on page 4, lines 25-28 of the specifications.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,597,683 to Haartsen in view of U.S. Patent No. 4,750,176 to Van Veldhuizen.

Haartsen does not disclose that the Baseband packet includes a payload CRC and the payload CRC is not checked in the master when the Baseband packet was forwarded, but is checked by the second slave after the forwarding step.

Van Veldhuizen discloses in Figure 2 that a Baseband packet includes a payload CRC (Element 56) and the payload CRC is not checked in the master when the Baeband packet was forwarded but is checked by the second slave after the forwarding step. The master forwards a message (Elements 50-54) to a designated slave. The slave answers with another message (Elements 58-62), which includes an acknowledge block (Element 58) that signals to the master station a positive acknowledgement, negative acknowledgement or no acknowledgement. The master station utilizes the acknowledge block to determine whether or not retransmission is necessary. Refer to Column 2, line 63 to Column 3, line 23 and Column 3, lines 26-50. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include disclose that the Baseband packet includes a payload CRC and the payload CRC is not checked in the master when the Baseband packet was forwarded, but is checked by the second slave after the forwarding step; the motivation being that this allows the destination slave station to determine whether or not a packet was received correctly and send a message back to the master station for the master station to retransmit the data if there was an error.

8. Claims 14 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,590,928 to Haartsen in view of U.S. Patent No. 6,597,683 to Gehring et al.

Referring to claims 14 and 23, Haartsen does not disclose including the address information of the first slave in the Baseband packet header.

Gehring et al disclose in Figures 4 and 6 that the address information (Figure 6, Element 80) of the first slave (transmitting slave) is located in the packet header (Figure 4, Element 46). The TDMA frame (Figure 4) includes a header that includes a command section (Element 46) for exchange of messages between master and slave devices. The command section (Figure 6) is further broken down into frames including a target or source identification number (Element 80), a command instruction (Element 8), and operand (Element 84) and a CRC block (Element 86). Refer to Column 9, lines 20-42 and Column 12, lines 24-31. When the source slave requests a data link to communication with a target slave, it transmits a data link REQ in he command block 82, its own identification number in the identification block 80 and the target slave's identification number in the operand block 82. Refer to Column 14, line 65 to Column 15, line 6. The master device can use the identification number of the source slave in identification block 80 to determine the state of the source slave. To receive a data link for the request, a source slave must be registered with the master station and not currently engaged in communication with other slave devices. Refer to Column 15, lines 7-31. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the address information of the first slave

in the Baseband packet header; the motivation being that the master devices uses this information to determine the state of the source slave when the source slave is requesting a data link with a target slave, since a source slave can be granted a data link only when it is registered with the master station and not engaged in other communications.

9. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,590,928 to Haartsen in view of U.S. Patent No. 6,138,019 to Trompower et al.

Haartsen does not disclose that the master has a memory for caching the Baseband packet to be forwarded.

Trompower et al disclose in Figure 3 a network of master nodes (base station, Elements 154 and 156) and slave stations (mobile terminals, Element 166) operating according to a frequency hopping communication system. "Each mobile terminal 166 communicates with devices on the system backbone 152 via a selected base station 154,156 and/or with other mobile terminals 166" (Column 9, lines 9-12). As shown in Figure 4, each base station includes a memory (Element 178) to "buffer packets of information such as those received over the system backbone 152 or those transmitted to or received from the mobile terminals 166 or wireless base stations 156" (Column 10, lines 21-25). When the mobile terminal 166 wants to send a message to another mobile terminal, a processor within the mobile terminal 166 forms an information packet including data together with a source address and a destination address, which is then forwarded to the base station 154,156 to be transmitted. Refer to Column 12, lines 50-

61 and Figure 8. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the master has a memory for caching the Baseband packet to be forwarded; the motivation being that a mobile terminal must transmit its packets to a target mobile terminal through a master node (base station), and the base station needs a memory to hold and route packets according to their various destinations.

Allowable Subject Matter

10. Claims 8, 15, 20, 21 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Ng whose telephone number is (703) 305-8395. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nguyen Chau can be reached on (703) 308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C. Ng CN
March 12, 2004

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